## Abstract

In a CMOS image sensor, correlated double sampling (CDS) is performed to reduce RESET noise: a first sampled signal is detected after RESET for the pixels, a second sampled value is determined at the end of an exposure time, and a differential signal substantially free from RESET noise is formed by subtracting the first sampled value from the second sampled value. In order to improve the deficient brightness dynamics, the first sampled signal is obtained only after a certain delay interval according to the invention so that this signal too contains not only a noise component but also brightness information. If the second sampled signal exceeds the saturation limit, only the accordingly scaled first sampled signal is used as the wanted signal. In this case the wanted signal has RESET noise but the latter is of almost no importance at high brightnesses. One achieves a multiplication of the brightness dynamics of a CMOS image sensor.

(Fig. 1)